

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-011066**Date Inspected:** 06-Jan-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Li Yang and Wu Zhi Cheng**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG Trail Assembly**Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance (QA) Inspector, S. Manjunath Math was present during the time noted above for observations relative to the work being performed.

This QA Inspector randomly observed the following work in progress:

Orthotropic Box Girder (OBG) Trial Assembly Areas

Segment 5CW to 6AW

This QA Inspector performed Joint Inspection with ABF Survey Team for the Longitudinal Diaphragm for Segment 5CW to 6AW (Field Segment Splice) between Panel Point (PP) 36 and PP 37 North and South side. The measured readings were fed in spread sheet, generated the report and submitted to the Task Leader and Engineer for review.

Segment 6CE to 7AE (U-Ribs)

This QA Inspector performed Joint Inspection with ABF Survey Team for the U-Ribs to U-Ribs (Total 39 nos.) for Segment 6CE to 7AE (Field Segment Splice) between Panel Point (PP) 47 and PP 48 North and South side. The measured readings were fed in spread sheet, generated the report and submitted to the Task Leader and Engineer for review.

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### Segment 6CE to 7AE

This QA Inspector along with Caltrans QA Mr. Manoj Prabhune performed Joint Inspection for the Deck Panel Offset and Root Opening for 6CE to 7AE (Field Segment Splice) between Panel Point (PP) 47 and PP 48. The measured readings were fed in spread sheet, generated the report and submitted to the Task Leader and Engineer for review.

### Segment 6AW (Lower Chevron)

This Quality Assurance (QA) Inspector witnessed final tension verification for Lower Chevron (North and South side) at Panel Point (PP) 37, PP 38, PP 39 and PP 40 for Segment 6AW. Inspected 10% on a random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 00229 Dated January 06, 2010.

Bolt sizes used were M22 x 70 RC Set# DHGM220020 and final torque required was 520 N-m.

Bolt sizes used were M22 x 80 RC Set# DHGM220012 and final torque required was 427 N-m and

Bolt sizes used were M22 x 75 RC Set# DHGM220005 and final torque required was 473 N-m.

Manual Torque wrench was been used with Sr. No. XQ2-675 and Hydraulic Torque wrench was been used with Model No. MP582-2 and Sr. No. PW090331001.

### Segment 6AW (Upper Chevron)

This Quality Assurance (QA) Inspector witnessed final tension verification for Upper Chevron (North and South side) at Panel Point (PP) 37, PP 38, PP 39 and PP 40 for Segment 6AW. Inspected 10% on a random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 00229 Dated January 06, 2010.

Bolt sizes used were M22 x 70 RC Set# DHGM220020 and final torque required was 520 N-m.

Manual Torque wrench was been used with Sr. No. XQ2-675.

### Segment 6BW to 6CW

This QA Inspector observed ZPMC welding personnel performing Shielded Metal Arc Welding (SMAW) for Deck Panel I-Stiffener Transverse Splice Weld for Segment 6BW to 6CW. Weld identified as DP 624-001-13/14, 15/16 and 17/18. The welder was identified as 068764. In process SMAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.e., WPS-B-P-2114-FCM-1. It was observed that the parameters noted down by ZPMC QC are in compliance with WPS.

### Segment 6BW to 6CW

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This QA Inspector observed ZPMC welding personnel performing Flux Cored Arc Welding (FCAW) for Side Panel Cross Beam side for Segment 6BW to 6CW. Weld identified as OBW6C-004. The welder was identified as 220066 and 053609. In process FCAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.e., WPS-B-T-2233T. It was observed that the parameters noted down by ZPMC QC are in compliance with WPS.

### Segment 6BW to 6CW

This QA Inspector observed ZPMC welding personnel performing Flux Core Arc Welding (FCAW) for Side Panel for Segment 6BW to 6CW. Weld identified as SP413-001-31/32, 33/34 and 35/36. The welders were identified as 200676 and 051246. In process FCAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.e., WPS-B-T-2233-B-U2-F. It was observed that the parameters noted down by ZPMC QC are in compliance with WPS.

### Segment 6BW to 6CW

This QA Inspector observed ZPMC personnel performing Heat Straightening for the Longitudinal Diaphragm for Segment 6BW to 6CW between PP 40 and PP41. Heat straightening been performed as they were misaligned. Heat Straightening been performed against the Heat Straightening Report (HSR) HSR1 (B)-7992 Rev.0 Dated Dec 11, 2009 for the following weld Joints.

Seg 029B-007~008

Seg 029C-038~039

Seg 027D-035~038

Seg 029F-035~038

LD009A-001~010

LD010A-001~010

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

### Summary of Conversations:

No relevant conversations.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact , who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Math,Manjunath	Quality Assurance Inspector
<b>Reviewed By:</b>	Miller,Mark	QA Reviewer

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